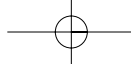


PACIFIC
evolution



Wharfedale



pacific-evolution

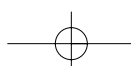
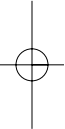


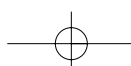
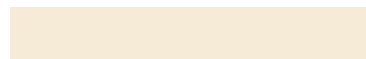
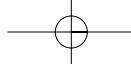
Pacific Evolution from Wharfedale has been conceived as the natural successor to the critically-acclaimed Pacific Series. It builds upon the strong foundations established by Pacific and reinforces our aim to introduce components and materials normally reserved

“Key principles of traditional audiophile design have been integrated with cool, modern styling to create a range that caters perfectly for today’s hi-fi enthusiast”



for high-end products costing several thousands of pounds, into loudspeakers which are not only affordable, they are practical and usable on an everyday basis. Key principles of traditional audiophile design have been integrated with cool, modern styling to create a range that caters perfectly for today’s hi-fi enthusiast who wants excellent sound performance with movies and music alike from speakers that really enhance the appearance of your system and room.









When auditioning a new speaker, it is easy to be impressed by dramatic 'boom-tizz' which can sound excellent in the demo room, but proves ultimately unfulfilling and even fatiguing after prolonged listening.

At Wharfedale, we believe in a more balanced approach. Yes, music should be exciting and entertaining, but this should be achieved through detail and realism rather than by enhancing bass and treble responses. The mid-range should be smooth and natural; the treble should be clean and well focussed; the bass taut and controlled. Everything should be well integrated and free from colouration and boxiness.

“At Wharfedale, we believe in a more balanced approach. Yes, music should be exciting and entertaining, but this should be achieved through detail and realism”

Evolution is the epitome of these ideals and to hear music through these loudspeakers is to hear the music as it was meant to be heard and not the loudspeakers' 'interpretation'.

The famous Wharfedale stereo image is a testament to the accuracy and resolution possible from our tweeters, the cleanliness of the mid-range and bass, a consequence of the speed and control of our unique woven KEVLAR drivers, but it is the package as a whole that you will listen to for many years to come and therefore the package that must provide the most rewarding listening experience, not just in the demo room, but for many years to come.

materials and technology



The Evolution series represents a thorough understanding of the importance of materials science in loudspeaker manufacture. The advances made in the last five years alone allow for lighter, stronger cone materials, better understanding and control of cabinet resonance and the effects of crossover components and design on phase integrity.

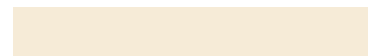
Our use of KEVLAR polymer in the bass and mid-range drive units is not unique, but KEVLAR itself only has tensile strength. To form a loudspeaker cone, it must be woven and bonded with a suitable agent to give it the necessary properties. Herein lies the skill. Our cones are bi-directionally woven and bonded with a special resin in such a way as to help absorb any standing waves formed within the cabinet. Because KEVLAR is so light and strong, the cone can start and stop virtually

instantly, and our special weave prevents any distortion or off-axis movement of the cone, even with large transients.

It is the movement of current through the 'voice-coil' that produces the magnetic field to drive a loudspeaker. It stands to reason then, that the quality of the voice coil is paramount to the performance of that loudspeaker. At Wharfedale, each voice coil is wound from very pure copper to exceptionally tight tolerances. In order to extract the maximum amount of signal information and, hence, detail, the mid-range coils are double wound and the bass voice coils are quadruple wound. Whilst this has a subtle effect on sensitivity, the rewards in terms of resolution and accuracy far outweigh any loss of sensitivity – particularly in view of the power available from the majority of modern amplifiers.









It is only because we manufacture every part of the loudspeaker ourselves that this is possible. Whereas other manufacturers may use many 'off-the-shelf' parts, every Wharfedale product is designed using bespoke components

The Evolution's tweeter pods are cast from an aluminium alloy and mechanically isolated from the rest of the cabinet. This serves to protect the tweeter from any interference caused by lateral cabinet vibration. This pod is more closely incorporated into the cabinet to improve coherency and consequently, bass-treble integration.

The tweeter's magnet assembly is a high gauss neodymium unit - very efficient and lightweight. This preserves the accuracy of the top end and has a huge impact on the depth of the 'soundstage' produced. The stereo image produced by Evolution extends far beyond the confines of the listening area with voices and instruments occupying very precise locations. Even in complex orchestral pieces the instruments can be easily discerned by their position in the sound-stage.



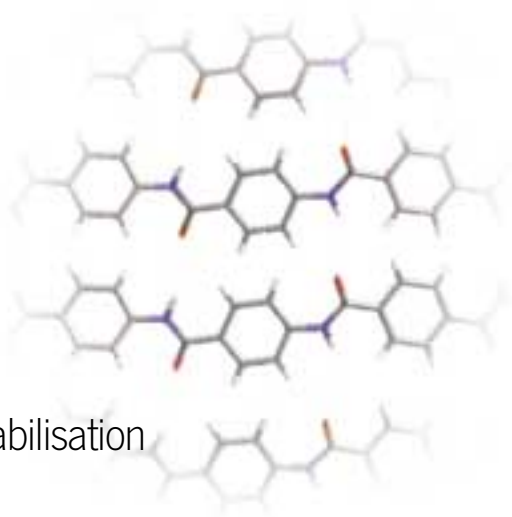
A good test of tweeter accuracy is to play a mono recording and listen for the position of the voices. They should perceptibly emanate from directly between the two speakers and not move at all when the frequencies change.

Our crossovers use audiophile grade components in a very simple orientation to maintain phase through the transition from driver to driver. This results in the famously smooth and open mid-range which is a hallmark of the Wharfedale sound. Frequency response is more easily controlled through drive unit and cabinet design. It is only because we manufacture every part of the loudspeaker ourselves that this is possible. Whereas other manufacturers may use many 'off-the-shelf' parts, every Wharfedale product is designed using bespoke components - perfectly tuned to produce an ideal response range and hence

avoiding the necessity for correction using overly complicated crossovers that, in turn, introduce phase and frequency anomalies.

All products in the Evolution series can be bi-wired and this is a worthwhile activity even if your amplifier has only one set of taps - crossover stress can be reduced like this and the already 'open' sound is further improved. Commensurate with modern audiophile thinking, we have used heavy duty, gold-plated terminals which can accept 4mm banana plugs or bare wire, if you prefer.

Oversize spikes are included with all the floorstanding models to reduce to an absolute minimum the dissipation of energy through the floor. As well as being a nice aesthetic detail, these serve to improve dynamic attack and more generally improve detail in the bass region.



UV Stabilisation

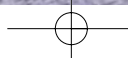
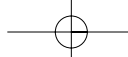


KEVLAR is an aramid fibre introduced by DuPont in 1971 which has subsequently been universally adopted as the material of choice where high tensile strength and low weight characteristics are required. It has revolutionised many industries with racing cars, boats and even bullet-proof jackets making use of its unique properties. KEVLAR is stronger than steel weight for weight and has an initial modulus that is five times greater than polyester. Untreated KEVLAR, however, can degrade, albeit slowly, under UV light. Up to 50% of the modulus strength can be lost over three months continuous exposure to UV.

That's not to say untreated KEVLAR-coned loudspeakers will disintegrate eventually, they will certainly last for many years after paper cones have fallen by the wayside. We can, however, improve the long-term stability of the KEVLAR using a complex treatment process.

At Wharfedale, our KEVLAR is treated to prevent such degradation and to ensure that the performance of your loudspeakers remains constant for many years. As well as pre-aging the KEVLAR before the bonding process, we use a special UV screen as part of our resin compound which prevents further penetration of damaging UV rays.







Pacific Evolution DFS Surround Speakers



The EVO DFS from Wharfedale has been designed specifically to generate the perfect rear sound field, a topic that many manufacturers miss-understand. It is simply not enough to use smaller standard loudspeakers to handle the rear effects. A dedicated bi-polar speaker is necessary to convey the true spatial sensation as these alone can produce both the diffuse ambient sound, and the precise stereo image needed to feel truly involved. When placed on a rear wall, a pair of EVO DFS will create a direct and precise stereo image from the inward facing drivers, while the outward facing drivers fire onto the walls creating both reverb and ambience.

Ambience is necessary to create the spatial awareness and to define the limits of the sound field – when a voice is heard in an enclosed space, it should sound as such, with a slight

ambient reverb. Different environments produce different ambient effects. They may only be slight, but are essential to a sense of realism and space.

Pinpoint stereo imaging is also essential. If there is a sound coming from behind you, you want to know where from. Sounds, as well as having ambience, need localisation. Whilst the ambience establishes the soundstage, the imaging then places sounds and voices within that soundstage. The combination of the two types of sound work in synergy to enhance the experience and draw you into a movie or soundtrack in a way like never before.

provides exceptional dispersion characteristics for an open and revealing sound while the extruded triangular cross-section is essential for the acoustic nature of the rear sound field.



PowerCube DX subwoofers



The perfect companions for the EVOs in a Home Cinema set-up are our mighty PowerCube DX subwoofers.

The addition of a sub-woofer will add weight and authority to any system, extending the frequency response much further than conventional bass drivers. With the Wharfedale PowerCube DX, the built-in 150w amplifiers are specifically engineered to provide a powerful response at these frequencies.

In a multi-channel system, a sub is essential to handle the 'LFE' or Low Frequency Effects channel of Dolby Digital or DTS sound. The PowerCube DX provides the impact and dynamics to really bring the soundtrack to life.

PowerCube DX offers high levels of compatibility and control. You can use it with a high level input if your stereo amplifier doesn't have a dedicated 'subwoofer out' phono connector. Simply wire your speakers through the subwoofer and the sub will separate the lower frequencies and pass the rest to your

speakers. The adjustable crossover, phase and volume allows you to calibrate it for a superbly integrated frequency response. Gold-plated loudspeaker terminals and the high quality components used preserve signal integrity.

In a Home Cinema system, or when used with an amplifier that has a dedicated 'subwoofer out' connector you would use the low-level connections. Once again, crossover, phase and volume can all be adjusted to enable optimum system balancing.

The downward firing long-throw bass drivers are incredibly strong and powerful. They provide a wide and directionless sound dispersion, so they are acoustically invisible.

The PowerCube DX features an automatic power on/ power off facility. From standby mode, the sub's internal amplifier will switch on whenever it detects an incoming signal. The sub will automatically switch back to standby mode after fif-

teen minutes of inactivity.

Once set up, the sub is not just unobtrusive, it's an elegant and solid piece of furniture. Aside from a small logo and power LED on the front, you might never know it was a subwoofer. With a choice of real wood veneers designed to match the standard Pacific Evolution finishes the PowerCube DX series will impress sonically and complement your decor perfectly.

A choice of sizes is available. The 10" or 250mm model, the PC-DX10, is suitable for small to medium size rooms and the 12"(300mm) model, the PC-DX12, is for larger rooms.



Perhaps the toughest problem any loudspeaker designer has to address is the issue of standing waves in cabinets. When a loudspeaker has flat, parallel sides, these waves are produced within the cabinet from the back of the drive units. These bounce back and forward inside the cabinet continuing to resonate long after the note itself has finished and produce a distinctive boxy dullness to music. Because standing waves in cuboid loudspeakers are of quite high amplitude, they affect the entire balance of the music, masking the bass detail and even have an impact on higher frequencies.

History has seen many attempts to combat this, ranging from internal damping to acoustically absorbent baffle materials. But, by far the most successful method to date has proved to be producing curved cabinets. Unfortunately though, until recently, the technology needed to manufacture such cabinets has made them extraordinarily expensive.

We have developed new manufacturing techniques over the last two years which enable us to produce these cabinets at a fraction of the previous cost.

The results are quite astonishing. Not only are standing waves significantly reduced in the new cabinet design, the overall operating 'noise floor' of the loudspeaker is lowered as a consequence of the changes. This means improvements throughout the frequency range, a flatter more consistent frequency response, and, of course huge improvements in bass detail. The curved front baffle also improves the dispersion characteristics of the sound. Because the drivers are right at the front of the cabinet, front baffle diffractions which can also impede the sound quality are reduced.

A liberal amount of complex internal bracing is used, both to isolate drivers, improve cabinet rigidity and to further reduce cabinet resonance.



Specifications

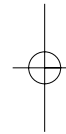
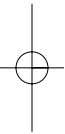
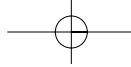


Model	EVO-80	EVO-100	EVO-200	EVO-300	EVO-400
Bass	5" B/M	6.5" B/M	6.5" B/M	6.5" BASS	6.5" BASS
Mid	-	-	-	6.5" B/M	6.5" B/M
Tweeter	25mm tex	25mm tex	25mm tex	25mm tex	25mm tex
Power	100W	120W	120W	200W	200W
Nominal Imp.	6	6	6	6	6
Sensitivity 1W@1M	87	87	87	89	89
Frequency Range	50 - 20k	50 - 20k	35 - 20k	35 - 20k	30 - 20k
Crossover Frequency	2.2k	2k	2k	200 / 2.8k	200 / 2.8k
Frequency Fb	55	45	40	35	30
Size (H x W x D)	330 x 185 x 335mm	380 x 227 x 343mm	850 x 227 x 343mm	880 x 229 x 403mm	1070 x 229 x 403mm



Model	EVO-CENTRE	EVO-DFS*	PC DX10	PC DX12
Bass	5" B/M	5" B/M x 2	10" 250mm	12" 300mm
Mid	-	-	-	-
Tweeter	25mm tex	25mm x 2	-	-
Power	100W	200W	Power Handling: Built-in 150W power	Built-in 150W power
Nominal Imp.	8	6	Sensitivity (for 2.83v@1m): Line input 300mV for 100W	Line input 300mV for 100W
Sensitivity 1W@1M	89	88	Frequency response: 32Hz to 170Hz	25Hz to 170Hz
Frequency Range	80 - 20k	70 - 20k	Crossover Range: 70 - 200Hz	70 - 200Hz
Crossover Frequency	2.3k	3k	Facilities: Low and High level inputs • Dual high & low outputs for second sub • Auto powersave standby mode • 0,90, 180, 270 • Phase shift select • Continuously variable crossover point selection • Supplied with detachable power cord	
Frequency Fb	55	70		
Size (H x W x D)	170 x 422 x 296mm	365 x 352 x 160mm	385 x 335 x 335mm	430 x 375 x 375mm

*EVO-DFS, available in black or white



Wharfedale

Wharfedale International Ltd.

IAG House,

Sovereign Court,

Ermine Business Park,

Huntingdon. PE29 6XU

Tel : 0845 458 0011 / +44 (0) 1480 447700

Fax : +44 (0) 1480 431767

www.wharfedale.co.uk

